

WHAT IS CLAIMED IS:

Sub A4 1. A method of manufacturing a pump impeller comprising:

5 forming in a single molding operation a shroud, vanes and shaft sleeve so as to precisely obtain alignment of an axis of rotation of said sleeve with a longitudinal center axis of an annular inlet ring mounted on said shroud where said annular inlet ring and said sleeve are on opposite sides of said shroud, whereby during rotation of said impeller smooth, efficient substantially noise-free operation is obtained because said sleeve is in balance with said annular inlet ring.

10 2. A pump impeller comprising:

15 a series of vanes having an outer end which is integrally mounted on a shroud, said shroud having a centrally located annular inlet ring which provides an inlet to an eye of said impeller; and

20 a hub integrally connected to an inner end of said vanes, said hub having a sleeve connected thereto, said sleeve having an axis of rotation, said inlet having a longitudinal center axis, said axis of rotation being aligned with said longitudinal center axis, whereby rotation of said impeller produces essentially no vibration with said impeller rotating smoothly, efficiently and substantially noise-free.

3. The pump impeller as defined in Claim 2 wherein:
a cover mounted on said hub covering said vanes, said
cover being located opposite said shroud relative to said vanes
substantially enclosing said vanes.

5 4. The pump impeller as defined in Claim 2 wherein:
said sleeve located on one side of said vanes and said
shroud being located on the opposite side of said vanes.

5. The pump impeller as defined in Claim 4 wherein:
said sleeve being at least one inch in length.

10 6. The pump impeller as defined in Claim 2 wherein:
said inlet being larger in size than said hub, whereby
said inlet being larger than said hub, said pump impeller can be
manufactured in a single molding operation.